REMARKS

The Office Action mailed December 30, 2003, has been carefully considered. In response to the Office Action, Applicants have amended the application. Applicants request that the Examiner consider the following remarks, and then pass the application to allowance.

Claim Objections

Claim 8 was objected to because "determining which" should have read "determining to which." Claim 8 has been corrected accordingly.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 1 and 21 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Claim 1 has been amended to clarify that transmission takes place M bits at a time, in accordance with the description in the specification. Claim 21 has been canceled.

Art Rejection Under 35 U.S.C. § 102(b)

Claims 1-18 and 26 were rejected under 35 U.S.C. § 102(b) as anticipated by Chapin (U.S. Pat. No. 5,948,073). Claims 1-30 were rejected under 35 U.S.C. § 102(b) as anticipated by Hara (U.S. Pat. No. 5,031,095). Claims 1-18 and 26-29 were rejected under 35 U.S.C. § 102(b) as anticipated by Arimilli (U.S. Pat. No. 6,128,707).

Claims 1, 13, and 26 have been amended to recite the use of a token ring scheme to control transmission of the N-bit signal groups, wherein if an event change is detected and a token is held, then a signal group is transmitted across the M-bit wide connection, and then the token is passed on, whereas if no event is detected, the token is simply passed on without transmission across the M-bit wide connection. This resource-saving feature is neither taught nor suggested by the applied prior art. Specifically, the passage of Chapin et al. referenced in the Office Action (col. 5, lines

35-83) merely mentions the use of an interrupt logic circuit (65) to generate and send an interrupt signal to the microprossessor (15) when an input bit changes state. The particular bit is identified based on information from a status register (60). Importantly, "Software must then be responsible for isolating the input that changed state by maintaining an input map and comparing it to the filtered input registers of the interrupting chain."

The present invention is not encumbered by such software limitations, but rather relies on the token ring scheme described above. It is respectfully submitted that the absence of scheme from the Chapin et al. as well as the other applied prior art speaks to the patentability of the claimed invention, and passage of the application to allowance is earnestly solicited.

Conclusion

In view of the preceding discussion, Applicants respectfully urge that the claims of the present application define patentable subject matter and should be passed to allowance. Such allowance is respectfully solicited.
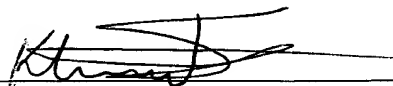
If the Examiner believes that a telephone call would help advance prosecution of the present invention, the Examiner is kindly invited to call the undersigned attorney.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: February 27, 2004   By: _____

Khaled Shami
Reg. No. 38,745

Post Office Box 1404
Alexandria, Virginia 22313-1404
(650) 622-2300